

**REMARKS**

Claims 2, 5, 9-11 and 13-17 have been examined. Claims 2 and 11 have been rejected under 35 U.S.C. § 102(e), and claims 5, 9, 10 and 14-17 have been rejected under 35 U.S.C. § 102(b). Also, the Examiner has indicated that claim 13 contains allowable subject matter.

**I. Preliminary Matter**

The Examiner has objected to claim 13 due to a minor informality. Accordingly, Applicant has amended claim 13 in a manner believed to overcome the objection. Such amendment is not made in view of the prior art and does not narrow the scope of the claim.

**II. Rejections under 35 U.S.C. § 102(e) in view of U.S. Patent No. 6,023,210 to Tulintseff (“Tulintseff”)**

The Examiner has rejected claim 2 under 35 U.S.C. § 102(e) as allegedly being anticipated by Tulintseff.

Applicant submits that claim 2 is patentable over the cited reference. For example, claim 2 recites that at least one through hole is formed in a ground plate and an inner wall of the through hole is only directly electrically connected to the ground plate.

The Examiner maintains that slit 132b discloses the claimed through hole. However, slit 132b forms a small part of the coupling slot 132. In other words, the entire slot 132 forms a type of through hole. For example, as disclosed in the reference, the thin slits 132b can be added to the coupling slot 132 to achieve a higher coupling efficiency (col. 5, lines 10-17). One skilled in

the art would not modify the coupling slot 132 to only contain the thin slit 132b and no other portion since such configuration would greatly reduce the coupling efficiency.

In addition, Tulintseff specifically discloses that the slot 132, which includes the portions 132b, is used to promote energy coupling between the layers 120 and 140 (i.e., the alleged signal lines) (col. 4, lines 10-13). If the inner walls of the slot 132 were only directly electrically connected to themselves, i.e., as set forth in the claim, the slot 132 would no longer work for its intended purpose which is to promote the energy coupling.

In addition, Tulintseff fails to teach or suggest a plurality of through holes that are arranged in a matrix, as recited in claim 2.

Accordingly, Applicant submits that claim 2 is not anticipated by Tulintseff.

### **III. Rejections under 35 U.S.C. § 102(e) in view of U.S. Patent No. 6,084,548 to Hirabe (“Hirabe”)**

The Examiner has rejected claims 2 and 11 under 35 U.S.C. § 102(e) as allegedly being anticipated by Hirabe.

#### **A. Claim 2**

Applicant submits that claim 2 is patentable over the cited reference. For example, claim 2 recites that a plurality of through holes are formed in a ground plate and the plurality of through holes are arranged in a matrix having at least two rows and at least two columns.

The Examiner maintains that element 405 of Hirabe disclose the claimed through holes. However, as shown in the figures of Hirabe, the alleged through holes are not arranged in any type of matrix having at least two rows and at least two columns, as recited in claim 2.

Accordingly, Applicant submits that claim 2 is patentable over the cited reference.

**B. Claim 11**

Applicant submits that claim 11 is patentable over the Hirabe reference. For example, claim 11 recites a plurality of through holes that are formed along a direction orthogonal to a longitudinal direction of a signal transmission line. The Examiner maintains that elements 405 disclose the claimed through holes. However, such through holes are not formed in a direction orthogonal to a longitudinal direction of the signal transmission lines.

Accordingly, Applicant submits that claim 11 is patentable over the cited reference.

**IV. Rejections under 35 U.S.C. § 102(b) in view of U.S. Patent No. 4,521,753 to Schloemann (“Schloemann”)**

The Examiner has rejected claims 5 and 16 under 35 U.S.C. § 102(b) as allegedly being anticipated by Schloemann.

**A. Claim 5**

Applicant submits that claim 5 is patentable over the cited reference. For example, claim 5 recites that at least one through hole is formed in a ground plate, and an inner wall of the through hole is only directly electrically connected to the ground plate.

The Examiner maintains that Schloemann discloses the above feature. In particular, the Examiner maintains that ground plane conductor 118 discloses the claimed ground plate, and void 118' discloses the claimed through hole (Figure 11 of Schloemann). However, as set forth in the October 26, 2005 Amendment, Figure 11 of Schloemann shows a second ground plane, i.e., ground plane conductor 128. The ground plane conductor 128 also has a void 128'. As shown in Figure 12, the two ground planes are placed on each other and therefore are connected together. Accordingly, the inner wall of the alleged through hole 118' is not *only* directly electrically connected to the alleged ground plate 118, as recited in claim 2. Rather, the inner wall of the alleged through hole 118' is also directly electrically connected to the inner wall of the void 128' of the ground plane conductor 128.

In response to the above remarks, the Examiner maintains that the inner walls of the void 128' are *indirectly* connected to the inner walls of the void 118', such that there is no direct connection as recited in the claim. However, there is no intervening structure between the ground plates 118 and 128. Further, the voids are formed to exactly mate with each other to form the void 135', as shown in the figures and specifically described in column 12, lines 18-22.

Accordingly, the bottom edge of void 118' directly contacts the top edge of the void 128' and therefore, the voids are directly electrically connected to each other.

Accordingly, Applicant submits that claim 5 is not anticipated by Schloemann, and respectfully requests the Examiner to reconsider and withdraw the rejection.

**B. Claim 16**

Applicant submits that claim 16 is patentable over the cited reference. For example, claim 16 recites that the plurality of through holes are arranged in a matrix having at least two rows and at least two columns. The Examiner maintains that voids 128' disclose the through holes. However, such through holes are not arranged in a matrix in the manner recited in claim 16. Accordingly, Applicant submits that claim 16 is patentable over the cited reference.

**V. Rejections under 35 U.S.C. § 102(b) in view of U.S. Patent No. 4,399,341 to Yasuoka ("Yasuoka")**

The Examiner has rejected claims 9, 10, 14, 15 and 17 under 35 U.S.C. § 102(b) as allegedly being anticipated by Yasuoka.

**A. Claim 9**

Applicant submits that claim 9 is patentable over the cited reference. For example, claim 9 recites a signal line, a ground plate and another signal line disposed on an opposite side of the ground plate as the signal line.

The Examiner maintains that Yasuoka discloses the above features. In particular, the Examiner maintains that the center conductor 12 and the ladder portion 13 disclose the claimed signal line, while the ground conductor 15 discloses the claimed ground plate (Figure 2). However, the Examiner maintains that the coaxial line 20 discloses the other claimed signal line. Applicant respectfully traverses this assertion. For example, even if Applicant assumes *arguendo* that the coaxial line 20 discloses a type of signal line, the coaxial line 20 is disposed at a side portion of the ground conductor 15 and the center conductor 12. On the contrary, claim 9 recites that the other signal line is disposed on an opposite side of the ground plate as the first recited signal line. Applicant submits that the side surface of the ground conductor 15 is not “opposite” to the top surface of the ground conductor 15 on which the alleged first claimed signal line 12, 13 is disposed.

In view of the above, Applicant submits that Yasuoka fails to teach or suggest the features of claim 9.

**B. Claim 10**

Since claim 10 contains analogous features as recited above for claim 9, Applicant submits that claim 10 is patentable for at least analogous reasons as claim 9.

**C. Claim 14**

Since claim 14 is dependent upon claim 10, Applicant submits that such claim is patentable at least by virtue of its dependency.

**D. Claim 15**

Since claim 15 is dependent upon claim 9, Applicant submits that such claim is patentable at least by virtue of its dependency.

In addition, claim 15 recites that a width of each of the slit holes is smaller than a width of each of the respective plurality of thin strips. On the contrary, each portion of the alleged thin strips (i.e., strips of the ladder portion 13) are smaller than the slit holes 14 between the strips. Accordingly, Applicant submits that claim 15 is patentable for at least this additional reason.

**E. Claim 17**

Since claim 10 contains analogous features as recited above for claim 9, Applicant submits that claim 10 is patentable for at least analogous reasons as claim 9.

**VI. Allowable Subject Matter**

As set forth above, the Examiner has indicated that claim 13 contains allowable subject matter.

**VII. Newly Added Claims**

Applicant has added claims 18 and 19 to provide more varied protection of the present invention.

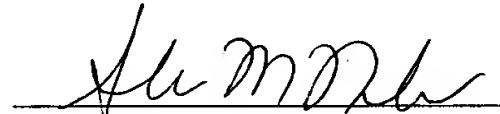
Amendment under 37 C.F.R. § 1.111  
U.S. Application No. 09/664,094

## VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Allison M. Tulino  
Registration No. 48,294

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: April 11, 2006